Claims:

1. A pH-sensitive liposome system comprising

(a) 1-acyl-2-acyl-glycero-3-phosphoethanolamine and

(b) 1-acyl-2-acylsuccinylglycerol or 1-acyl-3-acylsuccinylglycerol

wherein in (a), both acyl-residues are the same or different and are saturated acyl residues that contain at least 14 C atoms or,

one acyl residue is a saturated acyl residue that contains at least 14 C atoms and the other acyl residue is a monounsaturated acyl residue that contains at least 14 C atoms and,

wherein in (b), both acyl residues are the same or different and are saturated acyl residues that contain at least 14 C atoms or,

one acyl residue is a saturated acyl residue that contains at least 14 C atoms and the other acyl residue is a monounsaturated acyl residue that contains at least 14 C atoms.

2. The pH-sensitive liposome system according to claim 1 wherein the acyl residues contain 14 – 22 C atoms.

3. The pH-sensitive liposome system according to claim 1 wherein in (a), both acyl residues are the same saturated acyl residues and in (b), both acyl residues are the same saturated acyl residues, the acyl residues in (a) and (b) being the same or different.

4. The pH-sensitive liposome system according to claim 1 wherein (a) is selected form the group consisting of dimyristoyl-glycero-3-phosphoethanolamine, dipentadecanoyl-glycero-3-phosphoethanolamine, dipalmitoyl-glycero-3-phosphoethanol-amine, diheptadecanoyl-glycero-3-phosphoethanolamine, distearoyl-glycero-3-phosphoethanolamine, dinonadecanoyl-glycero-3-phosphoethanolamine and diarachidoyl-glycero-3-phosphoethanolamine and (b) is selected from the group consisting of the 1,2- or 1,3-isomers of dimyristoylsuccinylglycerol, dipentadecanoyl-succinylglycerol, dipalmitoylsuccinylglycerol, diheptadecanoyl-succinylglycerol,

distearylsuccinylglycerol, dinonadecanoylsuccinylglycerol and diarachidonylsuccinylglycerol.

5. The pH-sensitive liposome system according to claim 1, wherein 1-acyl-2-acyl-glycero-3-phosphoethanolamine (a) is partially substituted by the corresponding polyethylene glycol (PEG)-modified compound 1-acyl-2-acyl-glycero-3-phosphoethanolamine-PEG (a*).

6. The pH-sensitive liposome system according to claim 5 wherein (a*) is present in an amount of from 0.5 to 5 mol%.

7. A composition comprising the pH-sensitive liposome system according to claim 1 and at least one contrast generating species useful in MR imaging or spectroscopy or optical imaging.

8. A composition according to claim 7 wherein the contrast generating species is one that is useful in MR imaging or spectroscopy.

9. A composition according to claim 8 wherein the contrast generating species is selected from the group consisting of paramagnetic compounds, superparamagnetic compounds, ferrimagnetic compounds, ferromagnetic compound and compounds containing other non zero spin nuclei than hydrogen.

10. A composition according to claim 8 wherein the contrast generating species is a paramagnetic species selected from the group consisting of free radicals, compounds comprising transition metals and compounds comprising lanthanide metals, preferably transition metal chelates, transition metal salts and lanthanide metal chelates, more preferably Gd-chelates, Dy-chelates, Eu-chelates Tm-chelates, Mn-chelates and manganese salts.

11. A composition according to claim 7 wherein the contrast generating species is a dye useful in optical imaging.

12. Composition according to claim 7 for use as a contrast agent.

13. A method for the identification of a tumour, inflammation or cardiac infarct tissue in a human or non-human animal subject comprising

c) administering to said human or non-human animal subject a contrast agent comprising the composition according to claim 7, and

d) generating at least one MR image, optical image or MR spectrum of said subject.

14. Use of the composition according to claim 7 for the manufacture of a contrast agent for the identification of a tumour, inflammation or cardiac infarct tissue in a human or non-human animal subject by MR imaging, optical imaging or MR spectroscopy.

15. A composition comprising the pH-sensitive liposome system according to claim 1 and at least one therapeutic agent.

16. A composition according to claim 15 wherein the therapeutic agent is an agent useful in tumour therapy or useful in the treatment of inflammation.

17. Compositions according to claim 15 for use as a medicament.

18. Use of the composition according to claim 15 for the manufacture of a medicament for the treatment of tumours or inflammation.

19. A composition according to claim 15 further comprising at least one contrast generating species useful in MR imaging or spectroscopy, optical imaging, X-ray, PET or ultrasound imaging.